

## CLAIMS

1. Method for simulating a communications network through objects (13) that model a respective set of network modules or devices, characterised in that it comprises the step of inserting for every module or device of said set at least one respective interfacing object (13a', 13a''; 121b, 122b, 123b, 124b, 125b) with other modules or devices of said set; said respective interfacing object (13a', 13a''; 121b, 122b, 123b, 124b, 125b) having an external side (A) and an internal side (B) with respect to the module or device, said external side (A) of said respective interfacing object (13a', 13a''; 121b, 122b, 123b, 124b, 125b) being uniform for all modules or devices of said set.

2. Method according to claim 1, characterised in that it comprises the steps of:

- realising, for a module or device of said set, a plurality of different implementations (13b'; 13c'; 13b'', 13c'', 13d''), and

- providing a unique interfacing object (13a'; 13a'') for all different implementations of said plurality.

3. Method according to claim 1, characterised in that it comprises the steps of:

- realising, for a module or device of said set, a plurality of different implementations (121a, 122a; 123a, 124a, 125a), and

- providing a respective interfacing object (121b, 122b; 123b, 124b, 125b) for every different implementation of said plurality of different implementations.

4. Method according to claim 1, characterised in that it comprises the step of configuring the external side (A) of said interfacing objects to allow the

communication among modules or devices of said set as events (200; 1000, 1010, 1020).

5        5. Method according to claim 1, characterised in that it comprises the step of configuring the external side (A) of said interfacing objects to allow the communication among modules or devices of said set as messages (110, 120; 2000, 2010).

6. Method according to claim 1, characterised in that it comprises the steps of:

10        - providing a statistics managing module (11d) to collect statistic data pertaining to the operation of said simulated network, and

15        - measuring said statistic data through said statistics managing module (11d) through the external side (A) of said interfacing objects (121b, 122b; 123b, 124b, 125b) associated to the modules or devices (121, 123) of said set.

20        7. Method according to claim 1, characterised in that the external sides (A) of said interfacing objects exchange information with homologous objects associated with modules or devices of said set through structures comprising:

25        - an indicator of the source module or device (S),  
      - an indicator (110) of the target module or device, and

      - the exchanged information (120).

30        8. Method according to claim 1, characterised in that said interfacing objects exchange information with homologous objects associated to the modules or devices of said set through structures comprising:

      - an indicator of the source module or device (S),  
      - a time indicator (210),  
      - an indicator of the target module or device (220), and

35        - the exchanged information (230).

9. Method according to claim 1, characterised in that said interface objects comprise functionalities chosen from the group composed of:

- messages dispatching functionality (3060),
- 5       - events dispatching functionality (3020, 3040),
- messages receiving functionality (3050), and
- events receiving functionality (3010, 3030).

10. System for simulating a communications network through objects (13) that model a respective set of network modules or devices, characterised in that the system includes, for every module or device of said set, at least one respective interfacing object (13a', 13a''; 121b, 122b, 123b, 124b, 125b) with other modules or devices of said set; said respective interfacing object (13a', 13a''; 121b, 122b, 123b, 124b, 125b) having an external side (A) and an internal side (B) with respect to the module or device, said external side (A) of said respective interfacing object (13a', 13a''; 121b, 122b, 123b, 124b, 125b) being uniform for all modules or devices of said set.

11. System according to claim 10, characterised in that it comprises:

- for at least one module or device of said set, a plurality of different implementations (13b'; 13c'; 13b'', 13c'', 13d''), and
- 25       - a unique interfacing object (13a'; 13a'') for all different implementations of said plurality of different implementations.

12. System according to claim 10, characterised in that it comprises:

- 30       - for at least one module or device of said set, a plurality of different implementations (121a, 122a; 123a, 124a, 125a), and

- a respective interfacing object (121b, 122b; 123b, 124b, 125b) for every different implementation of said plurality of different implementations.

5 13. System according to claim 10, characterised in that the external side (A) of said interfacing objects is configured for allowing the communication among modules or devices of said set as events (200; 1000, 1010, 1020).

10 14. System according to claim 10, characterised in that the external side (A) of said interfacing objects is configured for allowing the communication among modules or devices of said set as messages (110, 120; 2000, 2010).

15 15. System according to claim 10, characterised in that it comprises a statistics managing module (11d) to collect statistic data pertaining to the operation of said simulated network and in that said statistics managing module (11d) is configured for measuring said statistic data through the external side (A) of said  
20 interfacing objects (121b, 122b; 123b, 124b, 125b) associated to the modules or devices (121, 123) of said set.

25 16. System according to claim 10, characterised in that the external side (A) of said interfacing objects is configured for exchanging information with homologous objects associated to the modules or devices of said set through structures comprising:

30 - an indicator of the source module or device (S),  
- an indicator (110) of the target module or device, and  
- the exchanged information (120).

17. System according to claim 10, characterised in that the external side (A) of said interfacing objects is configured for exchanging information with

homologous objects associated to the modules or devices of said set through structures comprising:

- an indicator of the source module or device (S),
- a time indicator (210),
- 5       - an indicator of the target module or device (220), and
- the exchanged information (230).

18. System according to claim 10, characterised in that said interface objects comprise functionalities  
10 chosen from the group composed of:

- messages dispatching functionality (3060),
- events dispatching functionality (3020, 3040),
- messages receiving functionality (3050), and
- events receiving functionality (3010, 3030).

15       19. Object (13) of a system for simulating telecommunications networks according to one any of claims 10 to 18, characterized in that it comprises at least one respective interfacing object (13a', 13a''; 121b, 122b, 123b, 124b, 125b) having an external side  
20 (A) and an internal side (B) with respect to the modelled module or device, said external side (A) of said respective interfacing object (13a', 13a''; 121b, 122b, 123b, 124b, 125b) having a character that is independent from idiosyncrasies of said module or  
25 device.

20. Computer program product that is adapted to be loaded in the memory of at least one computer and comprising portions of software code to perform the method according to one any of claims 1 to 9.